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ABSTRACT

Data collected during the standardization of the 1976 Metropolitan Readiness Tests (MRT) were examined to provide information on sex differences in prereading skills. The MRT are designed for administration either at the beginning of kindergarten or between kindergarten and first grade. Performance on the six subtests and the total test on both forms of the MRT favors girls. Boys' scores are consistently more variable than girls' scores. Performance differences favoring girls occur not just at the mean, but throughout the distribution. Boy/girl differences are also apparent when absolute performance standards are set. Item data show that 111 of the 152 items from the two forms of the MRT favor girls, 16 significantly. A stepwise multiple regression analysis shows that subject sex is not a significant predictor of achievement, but that the two best predictors of end-of-year reading achievement (letter recognition and visual matching) are two of the MRT subtests where sex differences are largest. Although the data support the conclusion that girls have better prereading skills at the time of initial school entrance, they do not support the use of differential instructional treatment for boys and girls. (RL)

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SEX DIFFERENCES IN PREREADING SKILLS IN BEGINNING KINDERGARTEN

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In previous research, girls have often been found to demonstrate reading achievement in the early school years which, on the average, is superior to that of their male classmates (Maccoby & Jacklin, 1974). Although differences are often small and sometimes fail to reach significance, much research has been done concerning possible sources of such differences. Sex of the teacher, instructional strategies which may tend to favor girls, or cultural expectations concerning school achievement have all been studied as possible sources of these differences (Dwyer, 1975). Less attention though has been paid to the differences between girls and boys at the time of initial school entrance. If, as is often assumed, however, girls have better skills than boys at the time reading instruction is begun, this would be an important element in understanding the later development of differences in reading performance.

In this study, the performance of boys and girls on various prereading skills measured by the 1976 revision of the Metropolitan Readiness Tests (Nurss & McGauvran, 1976a) will be examined using large samples of children tested soon after the beginning of the kindergarten year when few children would have been previously exposed to formal reading instruction. The Metropolitan Readiness Tests (MRT) were developed on two levels, Level I to be administered at the beginning of the kindergarten year and Level II to be administered at the end of kindergarten or the beginning of grade 1. In this paper, data from three separate research programs conducted during the MRT standardization are examined to provide information concerning the following questions: Do girls perform better on the prereading skills measured by the MRT than do boys?

Do such differences occur with all or with only a few of these skills? How important are these differences for subsequent reading instruction?

Data Source

The data presented in this paper were collected incidentally as part of studies designed for other purposes. Three separate studies conducted as part of the standardization procedure provide information which are relevant to the purposes of this investigation. The first study is the main standardization study from which the test norms for Level I were developed. The samples were selected according to a stratified random sampling design to be representative of that part of the U.S. population who are enrolled in kindergarten. Testing for Level I was conducted in November 1974 and April 1975. Some children were tested in both programs using alternate forms, but fall and spring samples were not identical. The second study was designed to equate the two alternate forms of the test and to obtain alternate form reliabilities. All children participating in this study were administered both forms of the test. Five districts were selected to assure a range of community size, socioeconomic status, and geographic region, and tended to be somewhat higher achieving than were the standardization samples. The third study involved a random sample of classrooms drawn from among those participating in the fall standardization. Pupils in these classrooms were administered Form H of the Metropolitan Achievement Test - Primer Level in 1975 in order to measure the validity of the MRT for predicting end of year achievement. The principal results of all three studies are reported in the Level I Teacher's Manual Part II Interpretation and Use of Test Results. (Nurss and McGauvran, 1976b)

The MRT Level I consists of six subtests designed to measure auditory, visual, or language skills. Nine skill areas were selected for tryout after a careful review of the literature concerning those prereading skills important for later school achievement. From among these nine, the six finally included in level I were those which appeared most appropriate in difficulty for early kindergarten and which had the most satisfactory psychometric properties. Two alternate forms, P & Q, were developed. The six subtests are:

1. Auditory Memory. This is a short term memory task. Pupils are told to close their eyes while the teacher names a small number of common objects (ball, cup, tree, cat). They are then to open their eyes and mark the options which show the named objects in the proper order.

2. Rhyming. The child must select from among four pictured objects the one which rhymes with a stimulus word spoken by the teacher.

3. Letter Recognition. The children mark the letter named by the teacher.

4. Visual Matching. A stimulus consisting of letters, numbers or letter-like shapes is presented in a box at the beginning of each row. The task is to pick the option which matches the stimulus.

5. School Language & Listening. This test measures standard English Syntax and listening comprehension. Items specifically designed to measure vocabulary are not included.

6. Quantitative Language. This test covers simple enumeration and numeric and spatial concepts appropriate for this level.

Scores on each of the subtests are the number of correct responses. The total or Prereading skills composite is the simple sum of the six part scores.

Results

Performance of girls and boys on the six subtests and the total test on both forms of the MRT are given in Tables 1 and 2. All differences favor girls, and except for Rhyming, Form P, were significant well beyond the .01 level. Differences are largest on Auditory Memory, Letter Recognition, and Visual Matching and least on Rhyming on both forms of the test. Scores for boys are consistently more variable than for girls, although the differences are small. The distribution of scores is negatively skewed for both groups. Reliabilities in the fall range from .68 to .88 on the subtests for girls and from .70 to .88 for boys and in the spring from .62 to .86 for girls and .64 to .85 for boys. Reliabilities for the total score are .94 in the fall and .92 in the spring for both sexes.

Performance differences favoring girls occurred not just at the mean, but throughout the distribution. Table 3 compares the performance of boys and girls at the three quartile points, and at the 10th and 90th percentiles ranks. In all instances, except the 90th percentile on Rhyming, Form P, differences favored girls.

Boy-Girl differences were also apparent where absolute performance standards were set. In Table 4, the percent of boys and girls correctly responding to 90 percent or more of the items and the percent scoring at or below the chance level are given. A higher percentage of girls attained scores suggesting mastery of the skills tested. A higher percentage of boys were unable to score above the chance level on the various tests, although the proportion of children scoring in this range was quite small for both sexes. Significance tests were not performed, but the direction of the differences in all instances favored girls.

Item data were not collected separately for boys and girls as part of the full standardization testing program, but were collected as part of the smaller study for equating Forms P and Q. Performance data for this administration are shown in Table 5. Differences between boys and girls are similar in magnitude to those found in the standardization data, but most are not significant. Differences on all 152 items from the two forms (there is no overlap of items between Forms P and Q) were tabulated as to direction of any difference and 111 were found to favor girls with the remaining 41 favoring boys. Only 16 of the differences were significant, five of these at the .01 level, all favoring girls. Of these 16 items, six were Auditory Memory items, three each were from Rhyming, Letter Recognition, and Visual Matching, and one was from School Language and Listening. No items from the Quantitative Language scale showed significant differences.

Because of the size and representative character of the standardization samples, these data are probably a good estimate of the magnitude of the differences between boys and girls in the population. In Tables 1 and 2, the last column gives the differences in standard deviation units, where the standard deviation of the combined girl/boy distribution has been used. Except for Rhyming, these differences all lie within .10 and .20 standard deviation units on both forms.

Confirmation of the magnitude of these differences comes from studies at other points in time. Results for the April Standardization testing are given in Tables 6 and 7. Comparison of boy-girl raw score differences in these tables with those obtained in the fall shows that these differences have decreased over time. In every skill area tested, boys showed greater gains from fall to spring than did girls, although differences continued to favor girls and variation among boys' scores remained larger than among girls. This result is difficult to interpret, however, due to a marked ceiling effect.

By spring about 45 percent of all kindergarten pupils tested were able to respond correctly to 90 percent or more of the items (The Psychological Corporation, 1977). This ceiling effect probably makes the test inappropriate for comparing gains, particularly when more girls than boys were initially achieving at very high levels. The difference is similar with medians, however, which should be less sensitive to ceiling effects. Differences between the medians of girls and boys were 2.87 and 2.84 for Forms P & Q respectively as opposed to differences between means of 2.34 and 2.50 in November. In April differences between medians were 1.21 and 1.55 as compared to differences between means of 1.43 and 1.63.

On the other hand, the variability of the scores had also necessarily decreased somewhat so that when differences are expressed in s.d. units, the magnitude of the differences is very similar to the fall results. Again except for Rhyming, differences ranged from .09 to .19 s.d. units. On the total scores, the boy/girl differences were .16 and .19 on Forms P & Q respectively in the fall and .16 and .14 in the spring.

Data are also available concerning the magnitude of the differences in the fall of grade 1, with testing in October. Level II of the MRT also tests language, visual,and auditory skills although different subtests are used so that results are not directly comparable. Level II has eight subtests rather than six. The Prereading Skills Composite is the sum of scores on the first six subtests; when the last two optional subtests are administered, the eight subtest total (the Battery Composite) can also be obtained. The differences between performance of boys and girls on these two totals are given in Table 8. The differences in raw score are approximately 2 to 2 1/2 points and range from .13 to .15 s.d. units. Differences are significant well

beyond the .01 level. (See Nurss and McGauvran, 1976c, for a description of the sample.)

An earlier study reported for the 1965 MRT with testing in October of grade 1 is reported in the Manual of Directions for that edition (Hildreth, Griffiths, and McGauvran, 1965) The 1965 MRT did not measure auditory skills and included a vocabulary test and a "copying" test which measured fine motor coordination. Unlike the 1976 MRT, differences favored girls on only five of the six subtests with "Word Meaning", the vocabulary portion, favoring boys. This finding is consistent with previous research showing that boys often do better on vocabulary tests (Dwyer, 1975). None the less, the difference between means on the total test favored girls by 1.66 raw score points or about .10 sd units, so that the magnitude of difference is again not unlike that at the beginning of kindergarten.

The last study concerns the value of gender as a predictor of later achievement. Using the data from the predictive validity study, a step-wise multiple regression analysis was done with the Reading and Numbers score from the Primer Level-Metropolitan Achievement Test given in April as criteria and the six MRT scores (Form P only) from the fall and four background variables as predictors. The background variables were sex, chronological age in months, child's experience with prekindergarten (yes or no--a dichotomous variable), and five community socioeconomic levels. Table 9 gives the predictors, listed for each of the two criterion tests in the order in which they were entered in the step-wise analysis, along with the multiple R, standardized beta weights, and percent of additional variance accounted for. The sex variable was added ninth and eighth out of ten for Reading and Numbers respectively and contributes virtually nothing to the prediction of end of year achievement in kindergarten.

Correlations of sex with the other variables ranged from a high of .11 with Letter Recognition to essentially zero (<.001) with age and prekindergarten experience. Notice, however, that the two best predictors of end of year reading achievement are letter recognition and visual matching, two of the subtests where differences between boys and girls are largest.

Discussion

In this paper data have been presented which show that girls on the average score higher than do boys on measures of prereading skills at the beginning of kindergarten. These differences are largest for Letter Recognition, Visual Matching, and Auditory Memory, and least for Rhyming. The reason for the continued exception of Rhyming is unclear. The analogous subtest at Level II uses the same format as Rhyming to measure beginning consonant sounds. The differences between boys and girls on this subtest are .12 and .11 sd units on Forms P & Q respectively - a difference consistent with that found with other skills. Hence, the data do not support a hypothesis that boys might be better at this type of listening task. Nor is the Rhyming test less reliable than the others, although for each of the subtests the correlation with rhyming is lower than correlations with any of the other subtests. (Nurss and McGauvran, 1976b)

When working with samples as large as those in these studies, however, very small differences are significant and some have questioned whether they may in fact be sample variation due to insufficiencies in the sampling procedure. In order to further evaluate the differences found, sex differences were contrasted to differences between Forms P & Q. There is no overlap of items between the two forms and, since the tests are dictated, the forms were administered by different teachers to different classes. Hence the sample

variation should be larger between forms than between sexes if there are no true sex differences. The relevant data are included in previously referenced tables, but for ease of comparison, Table 10 summarizes these data for fall. Differences between boys and girls are larger than differences between forms in every case, again except for Rhyming. These results confirm that the differences found are not artifactual, and that on the average girls' performance is unequivocally superior to that of boys on the kinds of tasks measured by the MRT Level I.

How then do these differences relate to differences in the early school years between boys and girls in reading achievement? In the two studies summarized in Macoby and Jacklin (1974) in which magnitude was reported, sex differences in reading for seven year old children were somewhat larger than those found here; between .19 and .26 s.d. units on SRI reading and Gates reading speed, comprehension, and vocabulary. Unfortunately, it is difficult to say if such differences are significantly larger than those found in prereading skills in this study or what such an increase might mean. However, to the extent that larger performance differences between boys and girls in reading achievement can be demonstrated, these differences cannot be solely attributed to differences which existed at the time reading instruction was begun.

In studying sex differences in reading, though, an important methodological consideration is illustrated in the small equating study cited above for examining item data. In the results shown in Table 5, where samples sizes are somewhat larger than 300 each for boys and girls, the obtained differences in means are in most instances neither significantly different from zero nor from the estimated population means suggested by the standardization data. Clearly, even with these samples which are relatively large compared to those in many studies, the statistical tests are not sufficiently powerful to

discriminate between the alternate hypotheses. Hence in designing or reviewing studies of sex differences; the probably true magnitude of differences should be taken into account in evaluating the adequacy of sample sizes.

One last point to be made concerns the importance of the boy/girl differences for reading instruction. To the extent that it is common knowledge that girls are "readier" for school than are boys, a teacher may be tempted to plan instruction differently for boys than for girls. Although the data here support the conclusion that on the average girls have better prereading skills at the time of initial school entrance, they do not support the use differential instructional treatment for boys and girls. A difference between means of .1 to .2 of a standard deviation is very small compared to the individual variation of skills within each group. In addition, the multiple regression analysis tells us that knowledge of a child's sex will not help us in predicting his or her achievement, at least at the end of the kindergarten year. The only prescription which can be justified based on the results reported here is that instruction for an individual child should be planned according to his or her own skills without regard to gender.

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Table 1

Mean Scores of Girls and of Boys in the National Standardization Population of Metropolitan Readiness Tests: Level I

November Form P

Subtest	Number of Items	Girls (N=8396)			Boys (N=8621)			M, Girls minus M, Boys*	SE Diff	t*	SD of B+G Comb.	Ratio of Diff. to SD
		Mean	SD	SE Mean	Mean	SD	SE Mean					
Auditory Memory	12	8.09	2.99	.033	7.64	3.01	.032	.45	.046	9.8	3.01	.15
Rhyming	13	9.03	3.16	.034	8.94	3.20	.034	.09	.048	1.9	3.18	.03
Letter Recognition	11	8.10	3.25	.035	7.51	3.43	.037	.59	.051	11.5	3.36	.18
Visual Matching	14	10.70	3.11	.034	10.07	3.34	.036	.63	.050	12.6	3.25	.19
School Lang./List.	15	11.31	2.78	.030	11.03	2.89	.031	.28	.043	6.5	2.84	.10
Quantitative Lang.	11	7.47	2.53	.028	7.16	2.59	.028	.31	.040	7.7	2.57	.12
Total	76	54.70	13.93	.152	52.36	14.48	.156	2.34	.218	10.7	14.26	.16

*All differences are highly significant (much above .01 level) with the exception of Rhyming, which is close to the .05 level.

Table 2

Mean Scores of Girls and of Boys in the National Standardization Population of Metropolitan Readiness Tests: Level I

November Form Q

Subtest	Number of Items	Girls (N=6404)			Boys (N=6563)			M, Girls minus M, Boys*	SE Diff	t*	SD of B+G Comb.	Ratio of Diff. to SD
		Mean	SD	SE Mean	Mean	SD	SE Mean					
Auditory Memory	12	8.21	2.95	.037	7.65	3.00	.037	.56	.052	10.8	2.99	.19
Rhyming	13	8.42	3.43	.043	8.15	3.55	.044	.27	.062	4.4	3.50	.08
Letter Recognition	11	8.36	3.11	.039	7.80	3.32	.041	.56	.057	9.8	3.23	.17
Visual Matching	14	10.99	2.81	.035	10.46	2.97	.037	.53	.051	10.4	2.90	.18
School Lang./List.	15	11.59	2.61	.033	11.27	2.78	.034	.32	.047	6.8	2.71	.12
Quantitative Lang.	11	7.44	2.34	.029	7.08	2.46	.030	.36	.042	8.6	2.41	.15
Total	76	55.00	13.50	.169	52.42	14.20	.175	2.58	.243	10.6	13.93	.19

*All differences are highly significant statistically.

Table 3

Comparison of Scores for Boys and Girls at Selected Percentile Ranks

Forms P & Q, November

		Form P Percentile Ranks					Form Q Percentile Ranks				
Subtest		90	75	50	25	10	90	75	50	25	10
Auditory Memory	Girls	11.78	10.61	8.47	6.05	3.78	11.84	10.71	8.58	6.16	3.98
	Boys	11.56	10.14	7.86	5.55	3.47	11.56	10.15	7.87	5.54	3.44
Rhyming	Girls	12.87	11.81	9.50	6.68	4.41	12.76	11.52	8.78	5.66	3.46
	Boys	12.87	11.77	9.38	6.56	4.34	12.69	11.36	8.47	5.20	3.15
Letter Recognition	Girls	11.22	10.81	9.49	5.71	2.75	11.24	10.85	9.73	6.31	3.14
	Boys	11.16	10.65	8.61	4.65	2.12	11.18	10.69	9.05	5.15	2.47
Visual Matching	Girls	13.96	13.15	11.58	8.98	6.01	13.96	13.16	11.70	9.51	7.07
	Boys	13.78	12.80	10.84	7.97	5.01	13.76	12.81	11.09	8.74	6.30
School Lang./ Listening	Girls	14.31	13.35	11.91	9.85	7.38	14.35	13.50	12.15	10.34	7.90
	Boys	14.20	13.19	11.67	9.46	6.92	14.28	13.32	11.88	9.86	7.25
Quantitative Language	Girls	10.47	9.52	7.88	5.70	3.68	10.25	9.25	7.79	5.94	3.97
	Boys	10.32	9.27	7.56	5.26	3.35	10.12	9.01	7.37	5.44	3.47
Total	Girls	70.70	65.88	57.48	45.73	34.40	70.30	65.76	57.57	46.49	35.62
	Boys	69.52	64.18	54.61	42.55	31.48	69.02	63.82	54.73	42.86	32.31

Table 4

Percent of Boys and Girls Scoring

in High and Low Achievement Regions

Forms P and Q, November

Subtest	# of Items	90% Level	Chance Level	Form	Percent scoring at or above 90% Girls	Boys	Percent scoring at or below chance* Girls	Boys
Auditory Memory	12	11	3	P	26.5	21.1	8.7	10.1
				Q	27.6	21.3	7.5	10.3
Rhyming	13	12	3	P	29.0	28.3	5.6	6.1
				Q	25.2	23.5	10.2	12.0
Letter Recognition	11	10	3	P	49.9	42.4	14.1	18.4
				Q	53.4	46.1	11.6	16.0
Visual Matching	14	13	4	P	36.9	29.7	5.4	8.2
				Q	37.6	30.1	3.3	4.9
School Lang./ Listening	15	14	5	P	22.2	19.6	4.5	5.4
				Q	24.9	21.7	3.7	4.7
Quantitative Language	11	10	3	P	25.2	21.4	9.0	10.8
				Q	20.6	17.5	7.5	10.1
Total	76	68	20	P	19.6	15.2	1.7	2.7
				Q	19.0	13.9	1.6	2.7

*Chance levels were determined by the number of items divided by the number of options. All items, except for the 11 School Language items in School Language and Listening, have four options. School Language items have three options.

Table 5

Comparison of Girls' and Boys' Means
on Form P and Form Q for Fall Equating Group

Subtest	Form P					Form Q				
	Girls N=373	Boys N=366	Diff. in Means	SD of B+G Comb.	Diff. ÷ SD	Girls N=373	Boys N=366	Diff. in Means	SD of B+G Comb.	Diff. ÷ SD
Auditory Memory	8.62	8.25	.37	2.8	.13	8.79	8.34	.45*	2.8	.16
Rhyming	9.74	9.28	.46*	3.1	.15	8.80	8.84	-.04	3.5	.01
Letter Recognition	8.22	7.92	.30	3.2	.09	8.47	8.09	.38	3.2	.12
Visual Matching	11.15	10.81	.34	2.9	.12	11.09	11.04	.05	2.9	.02
School Lang./List.	11.88	11.62	.26	2.5	.11	11.72	11.65	.07	2.6	.03
Quantitative Lang.	7.61	7.51	.10	2.5	.04	7.73	7.55	.18	2.4	.08
Total	57.22	55.39	1.83	12.9	.14	56.60	55.51	1.09	13.5	.08

*Differences are significant at the .05 level.

Table 6

Mean Scores of Girls and of Boys in the National Standardization Population of Metropolitan Readiness Tests: Level I

Spring Form P

Subtest	Number of Items	Girls (N=4337)			Boys (N=4406)			M, Girls minus M, Boys*	SE Diff	t*	SD of B+G Comb.	Ratio of Diff. to SD
		Mean	SD	SE Mean	Mean	SD	SE Mean					
Auditory Memory	12	9.90	2.37	.036	9.50	2.53	.038	.40	.052	7.7	2.46	.16
Rhyming	13	9.76	3.22	.049	9.65	3.35	.050	.11	.070	1.6	3.29	.03
Letter Recognition	11	10.17	1.81	.027	9.79	2.17	.033	.38	.043	8.8	2.01	.19
Visual Matching	14	12.52	1.85	.028	12.19	2.12	.032	.33	.043	7.7	2.00	.16
School Lang./List.	15	12.69	2.11	.032	12.49	2.22	.033	.20	.046	4.3	2.17	.09
Quantitative Language	11	8.86	1.88	.029	8.65	2.00	.030	.21	.042	5.0	1.94	.11
Total	76	63.90	9.80	.149	62.27	10.86	.164	1.63	.222	7.3	10.38	.16

*Except for Rhyming, all Girl-Boy differences are highly significant statistically.

Table 7

Mean Scores of Girls and of Boys in the National Standardization Population of Metropolitan Readiness Tests: Level I

Spring Form Q

Subtest	Number of Items	Girls (N=5307)			Boys (N=5533)			M,Girls minus M,Boys	SE Diff	t	SD of B+G Comb.	Ratio of Diff. to SD
		Mean	SD	SE Mean	Mean	SD	SE Mean					
Auditory Memory	12	9.88	2.38	.033	9.50	2.57	.035	.38	.048	7.9	2.49	.15
Rhyming	13	10.18	2.94	.040	10.25	2.91	.039	-.07*	.056	1.2	2.93	.02
Letter Recognition	11	9.99	2.02	.028	9.63	2.28	.031	.36	.042	8.5	2.17	.17
Visual Matching	14	12.34	2.09	.029	12.02	2.31	.031	.32	.042	7.6	2.21	.15
School Lang./List.	15	12.49	2.23	.031	12.28	2.36	.032	.21	.045	4.7	2.30	.09
Quantitative Language	11	8.99	1.97	.027	8.77	2.07	.028	.22	.039	5.6	2.03	.11
Total	76	63.88	10.13	.139	62.45	10.85	.146	1.43	.202	7.1	10.53	.14

*This is the only comparison (for all measures, test forms, pupil groups) in which the boys' mean exceeded the girls'. But the difference is not significant (t = 1.2). All other differences are highly significant statistically.

Table 8

Performance of Boys and Girls on MRT Level II

Prereading Skills Composite and Battery Composite

Forms P & Q, November

		Form P		Form Q	
		Prereading	Battery	Prereading	Battery
Mean	Girls	54.37	64.18	54.73	64.93
	Boys	52.21	61.55	52.36	62.25
SD	Girls	15.88	18.79	15.69	18.49
	Boys	16.28	19.25	16.07	18.93
Difference in Means		2.16	2.63	2.37	2.68
SD of B/G Combined		16.12	19.07	15.93	18.77
Diff/SD		.13	.14	.15	.14

Table 9

Multiple Regression Results for Prediction of
Reading & Numbers (MAT, Primer) by Scores on Metropolitan
Readiness Test (Level I, Form P) & Background Variables (N=324)

Reading	R	beta	% var. added	Numbers	R	beta	% var. added
Letter Recog.	.655	.321	.429	Letter Recog.	.664	.253	.441
Visual Match	.691	.252	.049	Quantitative	.724	.207	.083
Prekindergarten	.713	.172	.031	Auditory Memory	.740	.189	.024
Age	.721	.095	.011	SES	.754	.150	.021
Quantitative	.724	.072	.004	Visual Matching	.758	.120	.006
Rhyming	.725	.040	.001	Rhyming	.761	.082	.004
Auditory Memory	.726	.033	.001	Age	.761	.028	.001
Sch. Lang./List	.726	.013	.000	Sex	.761	.018	.000
Sex	.726	.004	.000	Prekindergarten	.761	.018	.000
SES	.726	.001	.000	Sch. Lang./List	.762	-.008	.000

Table 10

Comparison of the Differences Between Forms P & Q
with the Differences Between Boys & Girls

Level I, November

	Differences Between Forms P & Q*		Differences Between Boys & Girls	
	for Girls	for Boys	Form P	Form Q
Auditory Memory	-.12	-.01	.45	.56
Rhyming	.61	.79	.09	.27
Letter Recognition	-.26	-.29	.59	.56
Visual Matching	-.29	-.39	.63	.53
School Lang./ Listening	-.28	-.24	.28	.32
Quantitative Language	.03	.08	.31	.36
Total	-.30	-.06	2.34	2.58

*Negative values indicate that the Form Q mean was higher than the Form P mean.